

ENTERED

see page 6

0570
01/22

8



OIPE

RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/046,924

DATE: 01/27/2003

TIME: 12:11:50

Input Set : D:\seqlist.txt

Output Set: N:\CRF4\01272003\J046924.raw

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4 <110> APPLICANT: Cases, Sylvaine
5      Stone, Scot
6      Zhou, Ping
7      Farese, Robert V.
8      Chi-Liang Eric Yen
10 <120> TITLE OF INVENTION: DIACYLGLYCEROL O-ACYLTRANSFERASE 2a
11      (DGAT2a)
14 <130> FILE REFERENCE: UCAL240CIP
16 <140> CURRENT APPLICATION NUMBER: US 10/046,924
C--> 17 <141> CURRENT FILING DATE: 2003-01-14
19 <150> PRIOR APPLICATION NUMBER: 60/271,307
20 <151> PRIOR FILING DATE: 2001-02-23
22 <150> PRIOR APPLICATION NUMBER: 09/794,715
23 <151> PRIOR FILING DATE: 2001-02-26
25 <160> NUMBER OF SEQ ID NOS: 18
27 <170> SOFTWARE: FastSEQ for Windows Version 4.0
29 <210> SEQ ID NO: 1
30 <211> LENGTH: 1231
31 <212> TYPE: DNA
32 <213> ORGANISM: Homo sapiens
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36 cgaggctgag cggagccagc gctctcacgg aggaccctgt tcgcgcgagg ggtctgggag      120
37 atggggcact ggatccagca tcctctccgc cctccaggac ctcttctctg tcacctggct      180
38 caataggtcc aaggtggaaa agcagctaca ggtcatctca gtgctccagt gggctcctgtc      240
39 cttccttgta ctgggagtgg cctgcagtgc catcctcatg tacatattct gcactgattg      300
40 ctggtcatc  gctgtgctct acttcacttg gctgggtgtt gactggaaca cacccaagaa      360
41 aggtggcagg aggtcacagt ggggtccgaaa ctgggctgtg tggcgctact ttcgagacta      420
42 ctttcccatc cagctggtga agacacacaa cctgctgacc accaggaact atatctttgg      480
43 ataccacccc catggtatca tgggcctggg tgccttctgc aacttcagca cagaggccac      540
44 agaagtgagc aagaagtcc  caggcatacg gccttacctg gctacactgg caggcaactt      600
45 ccgaatgcct gtgttgaggg agtacctgat gtctggagg  atctgccctg tcagccggga      660
46 caccatagac tatttgcttt caaagaatgg gagtggcaat gctatcatca tcgtggctcg      720
47 gggtgccgct gagtctctga gctccatgcc tggcaagaat gcagtcaccc tgcggaaccg      780
48 caagggtctt gtgaaactgg ccctgcgtca tggagctgac ctggttccca tctactcctt      840
49 tggagagaat gaagtgtaca agcaggtgat cttcgaggag ggctcctggg gccgatgggt      900
50 ccagaagaag ttccagaaat acattggttt cgccccatgc atcttccatg gtcgaggcct      960
51 cttctcctcc gacacctggg ggctgggtgcc ctactccaag cccatcacca ctgttggtgg      1020
52 agagcccatc accatcccca agctggagca cccaaccag caagacatcg acctgtacca      1080
53 caccatgtac atggaggccc tggatgaagct cttcgacaag cacaagacca agttcggcct      1140
54 cccggagact gaggtcctgg aggtgaactg agccagcctt cggggccaat tccctggagg      1200
55 aaccagctgc aaatcacttt tttgctctgt a                                     1231
57 <210> SEQ ID NO: 2

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Input Set : D:\seqlist.txt

Output Set: N:\CRF4\01272003\J046924.raw

58 <211> LENGTH: 388

59 <212> TYPE: PRT

60 <213> ORGANISM: Homo sapiens

62 <400> SEQUENCE: 2

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63 Met Lys Thr Leu Ile Ala Ala Tyr Ser Gly Val Leu Arg Gly Glu Arg
64 1 5 10 15
65 Gln Ala Glu Ala Asp Arg Ser Gln Arg Ser His Gly Gly Pro Ala Leu
66 20 25 30
67 Ser Arg Glu Gly Ser Gly Arg Trp Gly Thr Gly Ser Ser Ile Leu Ser
68 35 40 45
69 Ala Leu Gln Asp Leu Phe Ser Val Thr Trp Leu Asn Arg Ser Lys Val
70 50 55 60
71 Glu Lys Gln Leu Gln Val Ile Ser Val Leu Gln Trp Val Leu Ser Phe
72 65 70 75 80
73 Leu Val Leu Gly Val Ala Cys Ser Ala Ile Leu Met Tyr Ile Phe Cys
74 85 90 95
75 Thr Asp Cys Trp Leu Ile Ala Val Leu Tyr Phe Thr Trp Leu Val Phe
76 100 105 110
77 Asp Trp Asn Thr Pro Lys Lys Gly Gly Arg Arg Ser Gln Trp Val Arg
78 115 120 125
79 Asn Trp Ala Val Trp Arg Tyr Phe Arg Asp Tyr Phe Pro Ile Gln Leu
80 130 135 140
81 Val Lys Thr His Asn Leu Leu Thr Thr Arg Asn Tyr Ile Phe Gly Tyr
82 145 150 155 160
83 His Pro His Gly Ile Met Gly Leu Gly Ala Phe Cys Asn Phe Ser Thr
84 165 170 175
85 Glu Ala Thr Glu Val Ser Lys Lys Phe Pro Gly Ile Arg Pro Tyr Leu
86 180 185 190
87 Ala Thr Leu Ala Gly Asn Phe Arg Met Pro Val Leu Arg Glu Tyr Leu
88 195 200 205
89 Met Ser Gly Gly Ile Cys Pro Val Ser Arg Asp Thr Ile Asp Tyr Leu
90 210 215 220
91 Leu Ser Lys Asn Gly Ser Gly Asn Ala Ile Ile Ile Val Val Gly Gly
92 225 230 235 240
93 Ala Ala Glu Ser Leu Ser Ser Met Pro Gly Lys Asn Ala Val Thr Leu
94 245 250 255
95 Arg Asn Arg Lys Gly Phe Val Lys Leu Ala Leu Arg His Gly Ala Asp
96 260 265 270
97 Leu Val Pro Ile Tyr Ser Phe Gly Glu Asn Glu Val Tyr Lys Gln Val
98 275 280 285
99 Ile Phe Glu Glu Gly Ser Trp Gly Arg Trp Val Gln Lys Lys Phe Gln
100 290 295 300
101 Lys Tyr Ile Gly Phe Ala Pro Cys Ile Phe His Gly Arg Gly Leu Phe
102 305 310 315 320
103 Ser Ser Asp Thr Trp Gly Leu Val Pro Tyr Ser Lys Pro Ile Thr Thr
104 325 330 335
105 Val Val Gly Glu Pro Ile Thr Ile Pro Lys Leu Glu His Pro Thr Gln
106 340 345 350
107 Gln Asp Ile Asp Leu Tyr His Thr Met Tyr Met Glu Ala Leu Val Lys

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Input Set : D:\seqlist.txt

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```

108          355          360          365
109 Leu Phe Asp Lys His Lys Thr Lys Phe Gly Leu Pro Glu Thr Glu Val
110          370          375          380
111 Leu Glu Val Asn
112 385
114 <210> SEQ ID NO: 3
115 <211> LENGTH: 1167
116 <212> TYPE: DNA
117 <213> ORGANISM: Mus musculus
119 <220> FEATURE:
120 <221> NAME/KEY: misc_feature
121 <222> LOCATION: (1)...(1167)
122 <223> OTHER INFORMATION: n = A,T,C or G
124 <400> SEQUENCE: 3
125 atgaagaccc tcatcgccgc ctactcggg gtcctgcggg gtgagcgtcg ggcggaagct      60
126 gcccgcagcg aaaacaagaa taaaggatct gccctgtcac gcgaggggtc tgggcgatgg      120
127 ggcactggct ccagcatcct ctacgccctc caagacatct tctctgtcac ctggctcaac      180
128 agatcyaagg tggaaaaaca gctgcaggct atctcagtac tacaatgggt cctatccttc      240
129 ctggtgctag gagtggcctg cagtgtcatc ctcatgtaca ctttctgcac agactgctgg      300
130 ctgatagctg tgctctactt cacctggctg gcatttgact ggaacacgcc caagaaaggt      360
131 ggcaggagat cgcagtgggt gcgaaactgg gccgtgtggc gctacttccg agactacttt      420
132 cccatccagc tgggtgaagac acacaacctg ctgaccacca ggaactatat ctttggtatac      480
133 caccatcatg gcatcatggg cctgggtgcc ttctgtaact tcagcacaga ggctactgaa      540
134 gtcagcaaga agtttcctgg cataaggccc tatttggtta cgttggyygg taacttccgg      600
135 atgcctgtgc ttgcgcagta cctgatgtct ggaggcatct gccctgtcaa ccgagacacc      660
136 atagactact tgctctccaa gaatgggagt ggcaatgcta tcatcatcgt ggtgggaggt      720
137 gcagctgagt ccctgagctc catgcctggc aagaacgcag tcaccctgaa gaaccgaaa      780
138 ggctttgtga agctggccct gcgccatgga gctgatctgg ttccactta ttcctttgga      840
139 gagaatgagg tatacaagca ggtgatcttt gaggagggtt cctggggccg atgggtccag      900
140 aagaagttcc agaagtatat tggtttcgcc ccctgcatct tccatggccg aggcctcttc      960
141 tcctctgaca cctgggggct ggtgccctac tccaagccca tcaccaccgt cgtgggggag      1020
142 cccatcactg tccccaagct ggagcaccgc acccagaaag acatcgacct gtaccatgcc      1080
W--> 143 atgtacatgg aggcctggg gaagctcttt gacaatcaca agaccaaatt tggcctncca      1140
144 gagactgagg tgctggaggt gaactga
146 <210> SEQ ID NO: 4
147 <211> LENGTH: 387
148 <212> TYPE: PRT
149 <213> ORGANISM: Mus musculus
151 <400> SEQUENCE: 4
152 Met Lys Thr Leu Ile Ala Ala Tyr Ser Gly Val Leu Arg Gly Glu Arg
153 1          5          10          15
154 Arg Ala Glu Leu Pro Ala Ala Lys Asn Lys Asn Lys Gly Ser Ala Leu
155          20          25          30
156 Ser Arg Glu Gly Ser Gly Arg Trp Gly Thr Gly Ser Ser Ile Leu Ser
157          35          40          45
158 Ala Leu Gln Asp Ile Phe Ser Val Thr Trp Leu Asn Arg Ser Lys Val
159          50          55          60
160 Glu Lys Gln Leu Gln Val Ile Ser Val Leu Gln Trp Val Leu Ser Phe
161 65          70          75          80

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Input Set : D:\seqlist.txt

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162 Leu Val Leu Gly Val Ala Cys Ser Val Ile Leu Met Tyr Thr Phe Cys
163      85      90      95
164 Thr Asp Cys Trp Leu Ile Ala Val Leu Tyr Phe Thr Trp Leu Ala Phe
165      100     105     110
166 Asp Trp Asn Thr Pro Lys Lys Gly Gly Arg Arg Ser Gln Trp Val Arg
167      115     120     125
168 Asn Trp Ala Val Trp Arg Tyr Phe Arg Asp Tyr Phe Pro Ile Gln Leu
169      130     135     140
170 Val Lys Thr His Asn Leu Thr Thr Arg Asn Tyr Ile Phe Gly Tyr
171 145      150     155     160
172 His Pro His Gly Ile Met Gly Leu Gly Ala Phe Cys Asn Phe Ser Thr
173      165     170     175
174 Glu Ala Thr Glu Val Ser Lys Lys Phe Pro Gly Ile Arg Pro Tyr Leu
175      180     185     190
176 Ala Thr Leu Ala Gly Asn Phe Arg Met Pro Val Leu Arg Glu Tyr Leu
177      195     200     205
178 Met Ser Gly Gly Ile Cys Leu Val Asn Arg Asp Thr Ile Asp Tyr Leu
179      210     215     220
180 Leu Ser Lys Asn Gly Ser Gly Asn Ala Ile Ile Ile Val Val Gly Gly
181 225      230     235     240
182 Ala Ala Glu Ser Leu Ser Ser Met Pro Gly Lys Asn Ala Val Thr Leu
183      245     250     255
184 Lys Asn Arg Lys Gly Phe Val Lys Leu Ala Leu Arg His Gly Ala Asp
185      260     265     270
186 Leu Val Pro Thr Tyr Ser Phe Gly Glu Asn Glu Val Tyr Lys Gln Val
187      275     280     285
188 Ile Phe Glu Glu Gly Ser Trp Gly Arg Trp Val Lys Lys Phe Gln Lys
189      290     295     300
190 Tyr Ile Gly Phe Ala Pro Cys Ile Phe His Gly Arg Gly Leu Phe Ser
191 305      310     315     320
192 Ser Asp Thr Trp Gly Leu Val Pro Tyr Ser Lys Pro Ile Thr Thr Val
193      325     330     335
194 Val Gly Glu Pro Ile Thr Val Pro Lys Leu Glu His Pro Thr Gln Lys
195      340     345     350
196 Asp Ile Asp Leu Tyr His Ala Met Tyr Met Glu Ala Leu Val Lys Leu
197      355     360     365
198 Phe Asp Asn His Lys Thr Lys Phe Gly Leu Pro Glu Thr Glu Val Leu
199      370     375     380
200 Glu Val Asn
201 385
203 <210> SEQ ID NO: 5
204 <211> LENGTH: 1008
205 <212> TYPE: DNA
206 <213> ORGANISM: Mus musculus
208 <400> SEQUENCE: 5
209 atgatggtcg agttcgcgcc actcaacacc cgcgtggcac ggtgcctaca gaccgctgcg      60
210 gtgctgcagt gggctcctgtc cttcctcctg ctcgtgcagg tgtgcattgg aattatggtg      120
211 atgctggtcc tgtacaacta ttggttcctt tacatcccat atctggtctg gttttactat      180
212 gactggagaa cccagagca aggaggcaga agatggaact ggttccaaag ctggcctgtg      240

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RAW SEQUENCE LISTING

DATE: 01/27/2003

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TIME: 12:11:50

Input Set : D:\seqlist.txt

Output Set: N:\CRF4\01272003\J046924.raw

```

213 tggaagtatt ttaaggagta ttttccaatc tgtcttgtca aaacgcagga tttggatccg      300
214 ggtcacaatt atatatttgg gtttcaccct catggaatat tcgtgcctgg agcctttgga      360
215 aatttttgta caaaatactc ggacttcaag aagctatttc ctggctttac atcgtatctc      420
216 cacgtggcca agatctgggt ctgtttcccg ttgttccgag aatatctgat gagtaacggg      480
217 ccggtttcag tgtctaagga gagtttgtct catgtgctga gcaaggatgg aggtggcaat      540
218 gtctcaatca ttgtcctcgg aggtgcaaag gaggcgctgg aggtcacccc aggaacattc      600
219 accctgtgca tccgccagcg caaagggttt gttaagatgg ccttgaccca tggtgccagt      660
220 ttggttccag tattttcttt tggtgaaaat gatctatata agcaaattaa caaccccaaa      720
221 ggctcctggc tacgaactat acaagacgca atgtatgatt caatgggagt agccttgcca      780
222 ctgatatatg ccagagggaat tttccagcac tactttggca taatgcccta tcggaagctg      840
223 atctacactg ttgttggccg ccctatccct gttcagcaga ttctgaacct gacctagag      900
224 cagattgaag agctgcatca gacataccta gaggagctaa agaaactatt caatgaacac      960
225 aaagggaaat atgggattcc ggagcacgaa actctgggtat ttaaataa      1008
227 <210> SEQ ID NO: 6
228 <211> LENGTH: 335
229 <212> TYPE: PRT
230 <213> ORGANISM: Mus musculus
232 <400> SEQUENCE: 6
233 Met Met Val Glu Phe Ala Pro Leu Asn Thr Pro Leu Ala Arg Cys Leu
234 1 5 10 15
235 Gln Thr Ala Ala Val Leu Gln Trp Val Leu Ser Phe Leu Leu Leu Val
236 20 25 30
237 Gln Val Cys Ile Gly Ile Met Val Met Leu Val Leu Tyr Asn Tyr Trp
238 35 40 45
239 Phe Leu Tyr Ile Pro Tyr Leu Val Trp Phe Tyr Tyr Asp Trp Arg Thr
240 50 55 60
241 Pro Glu Gln Gly Gly Arg Arg Trp Asn Trp Val Gln Ser Trp Pro Val
242 65 70 75 80
243 Trp Lys Tyr Phe Lys Glu Tyr Phe Pro Ile Cys Leu Val Lys Thr Gln
244 85 90 95
245 Asp Leu Asp Pro Gly His Asn Tyr Ile Phe Gly Phe His Pro His Gly
246 100 105 110
247 Ile Phe Val Pro Gly Ala Phe Gly Asn Phe Cys Thr Lys Tyr Ser Asp
248 115 120 125
249 Phe Lys Lys Leu Phe Pro Gly Phe Thr Ser Tyr Leu His Val Ala Lys
250 130 135 140
251 Ile Trp Phe Cys Phe Pro Leu Phe Arg Glu Tyr Leu Met Ser Asn Gly
252 145 150 155 160
253 Pro Val Ser Val Ser Lys Glu Ser Leu Ser His Val Leu Ser Lys Asp
254 165 170 175
255 Gly Gly Gly Asn Val Ser Ile Ile Val Leu Gly Gly Ala Lys Glu Ala
256 180 185 190
257 Leu Glu Ala His Pro Gly Thr Phe Thr Leu Cys Ile Arg Gln Arg Lys
258 195 200 205
259 Gly Phe Val Lys Met Ala Leu Thr His Gly Ala Ser Leu Val Pro Val
260 210 215 220
261 Phe Ser Phe Gly Glu Asn Asp Leu Tyr Lys Gln Ile Asn Asn Pro Lys
262 225 230 235 240
263 Gly Ser Trp Leu Arg Thr Ile Gln Asp Ala Met Tyr Asp Ser Met Gly

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RAW SEQUENCE LISTING ERROR SUMMARY
PATENT APPLICATION: US/10/046,924

DATE: 01/27/2003
TIME: 12:11:51

Input Set : D:\seqlist.txt
Output Set: N:\CRF4\01272003\J046924.raw

Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:3; N Pos. 1137
Seq#:9; N Pos. 341

VERIFICATION SUMMARY

DATE: 01/27/2003

PATENT APPLICATION: US/10/046,924

TIME: 12:11:51

Input Set : D:\seqlist.txt

Output Set: N:\CRF4\01272003\J046924.raw

L:17 M:271 C: Current Filing Date differs, Replaced Current Filing Date

L:143 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3 after pos.:1080

L:367 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:9 after pos.:300